MULTIPLE CHOICE QUESTIONS WITH ANSWER

SUBJECT-BME

Q. 1.Intensive property is defined as

A. The property which depends on mass only
B. The property which depends on mass and medium
C. The property which does not depend on mass
D. The property which depends upon different process

Answer:C

Q. 2.Extensive property is defined as

A. The property which depends on mass only
B. The property which does not depend on mass
C. The property which depends upon different process
D. The property which depends on various thermodynamic cycles

Answer: A

Q.3. A homogeneous system , is defined as

A. The system which consists of more than one phase
B. The system which consists of single phase
C. The system which consists of more than one pure substances
D. Non of these

Answer:B

Q. 4.A pure substance is defined as

A. The substance which does not react with environment
B. The substance whose chemical composition throughout its mass is uniform
C. The substance whose physical characteristics never changes when it undergoes a process
D. All of the above

Answer:B

Q. 5.Atmospheric pressure is equal to

A. 760 mm of Hg

B. 101.32KN/m^2

C. 1.0132 bar

D. All of these

Answer: D

Q.6. The degree of hotness or coldness of any body is called

A. Heat

B. Temperature

C. Enthalpy

D. Internal energy

Answer: B

Q. 7.The instrument used to measure the temperature is

A. Barometer

B. Planimeter

C. Calorimeter

D. Thermometer

Answer:D

Q. 8.The selected characteristic in a thermometer which gives the reading of temperature is called

A. Ice point

B. Steam point

C. Thermometric property

D. None of these

Answer: C

Q.9. Which of the following statements is true?

A. Heat flow into the system is positive

B. Work done on the system is positive

C. Work done by the system is negative

D. Heat flow out of the system is positive

Answer: A

Q. 10.If a certain gas is heated in a rigid container then which one of the following statement is true?

A. dV=0

B. $\int PdV = 0$

C. δW=0

D. All of the above

Answer: D

Q. 11.Heat capacity is defined as

A. The product of mass and latent heat

B. The product of change in entropy and temperature

C. The product of temperature difference and specific heat

D. The product of mass and specific heat

Answer: D

Q. 12.Internal energy is the

A. Macroscopic energy mode

B. Microscopic energy mode

C. Both of the above

D. None of these

Answer: B

Q. 13.Internal energy of a system depends upon

A. Temperature ad pressure

B. Pressure and volume

C. Volume and mass

D. Temperature and mass

Answer: D

Q. 14.which one of the following statements is true?

A. dQ=dh-VdP
B. dQ=dh+VdP
C. dQ=du+VdP
D. dQ=du-VdP

Answer: A

Q 15.which one of the following statements is true?

A. h=U-RT
B. h=U-PV
C. h-PdV=U
D. h=U+RT

Answer: D

Q. 16.The unit of specific enthalpy is

A. N/S
B. J/Kg
C. KWh
D. KW/Kg

Answer:B

Q. 17.Steady flow means

A. The rates of flow of mass across the control surface is constant only
B. The rates of flow of energy across the control surface is constant only
C. The rates of flow of mass and energy across the system boundary are constant
D. The thermodynamic properties across the system boundary is constant

Answer: C

Q. 18.Which one of the following statements is correct for a steady flow system?

A. There is accumulation of energy within the control volume
B. There is no accumulation of energy within the control volume
C. There is accumulation of mass within the control volume
D. There is no accumulation of mass and energy within the control volume

Answer:D

Q. 19.Which one of the following statements is correct for a steady flow process?

A. The thermodynamic properties will have fixed values at a particular location and will not vary with time
B. The thermodynamic properties will have fixed values at different location and will vary with time
C. The thermodynamic properties will have no fixed values at a particular location and will not vary with time
D. None of the above

Answer: A

Q. 20.The differential form of SFEEE is

A. $\delta Q+\delta W=dh+VdV+gdz$
B. $\delta Q-\delta W=dh+VdV+gdz$
C. $\delta Q-\delta W=PdV+VdV+gdz$
D. $\delta Q+\delta W=dh-VdV-gdz$

Answer:B

Q. 21.Which one of the following statemenets is true?

A. Nozzle is a device which increase pressure of the flowing fluid
B. Diffuser is a device which increases velocity of the flowing fluid
C. Nozzle and diffuser both increase velocity of the flowing fluid
D. Diffuser is a device which increases pressure of the flowing fluid

Answer:D

Q. 22.Which one of the following is true?

A. Turbine receives work and discharges heat
B. Compressor receives heat and give positive work
C. Turbine and engine give positive work
D. Compressor and engine give positive work

Answer: C

Q. 23.Which one of the following is true?

A. Work is said to be low grade of energy
B. Heat is said to be low grade of energy
C. Heat is said to be high grade of energy and complete conversion of heat into work is possible
D. None of the above

Answer: B

Q. 24.The primary purpose of a heat engine is to convert

A. Work into heat
B. Work into internal energy
C. Heat into internal energy
D. Heat into work

Answer:D

Q.25. Which one of the following statement is true?

A. TER is defined as a large body of infinite work capacity which is capable of supplying continuous work
B. MER is defined as a large body which is capable of storing large amount of heat
C. TER is defined as a large body of infinite heat capacity which is capable of absorbing or rejecting an unlimited quantity of heat
D. None of the above

Answer: C

Q. 26.The thermal efficiency of heat engine is

A. $(Q_2-Q_1)/Q_1$
B. $(Q_1-Q_2)/Q_1$
C. $(Q_1-Q_2)/Q_2$
D. $(Q_1+Q_2)/Q_1$

Answer:B

Q. 27.The COP of refrigerator is

A. $Q_1/(Q_1-Q_2)$
B. $Q_2/(Q_1-Q_2)$
C. $(Q_1-Q_2)/Q_1$
D. $(Q_1-Q_2)/Q_2$

Answer:B

Q. 28.The efficiency is 50% when a CARNOT cycle works between two temperature limits of 100^0C and 50^0C , if the working substance is

A. Oxygen
B. Air
C. Nitrogen
D. Any substance

Answer:D

Q. 29.A refrigerator and a heat pump operate between the same temperature limits. If the COP of the heat pump is 6, then the COP of the refrigerator would be

A. 4
B. 5
C. 7
D. Can not predict

Answer: B

Q. 30.A heat engine is supplied with 800 KJ/sec of heat at 600^0K and heat rejection takes place at 300^0C . Which of the following results gives a reversible cycle

A. 100 KJ/sec rejected
B. 200 KJ/sec rejected
C. 300 KJ/sec rejected
D. 400 KJ/sec rejected

Answer: D

Q. 31.In a power plant, the turbine work is 50 KJ, pump work is 2 KJ and heat supplied by the boiler is 96 KJ. Then the thermal efficiency of the plant will be

A. 43%
B. 60%
C. 50%
D. 85%

Answer: C

Q.32. Work transfer and heat transfer are

A. path functions

B. point functions

C. both of these

D. None of these.

ANSWER:. A

Q.33. A thermodynamic cycle is defined as

A. a series of change of states from initial to final.

B. a series of state changes such that the initial state is identical with final state.

C. a series of state changes such that the initial state is not identical with final state.

D. a series of change of processes.

ANSWER:. B

Q.34.. Which one of the following is the intensive property?

A. volume

B. enthalpy

C. entropy

D. pressure

ANSWER:. D

Q.35. A process, in which the temperature of the working substance remains constant during its expansion or compression, is called

A. isothermal process

B. hyperbolic process

C. adiabatic process

D. polytropic process

ANSWER:, A

Q.36. The gas constant (*R*) is equal to the _____ of two specific heats.

A. sum

B. Difference

C. Product

D. Ratio
ANSWER:, B

Q.37. The specific heat at constant volume is

A. the amount of heat required to raise the temperature of unit mass of gas through one degree, at constant pressure

B. the amount of heat required to raise the temperature of unit mass of gas through one degree, at constant volume

C. the amount of heat required to raise the temperature of 1 kg of water through one degree

D. any one of the above

ANSWER:, B

Q.38. One Joule (J) is equal to

A. 1 N-m

B. 1 kN-m

C. 10 N-m/s

D. 10 kN-m/s

ANSWER:, A

Q.39. When the expansion or compression takes place according to the law $pv^n = C$, the process is known as

A. isothermal process

B. adiabatic process

C. hyperbolic process

D. polytropic process

ANSWER:, D

Q.40. Area under P-V diagram gives

A. work transfer

B. heat transfer

C. Temperature

D. None of these

ANSWER:,A

Q.41. Which one of the following is true?

A. heat transfer at constant pressure increases enthalpy of a system.

B. heat transfer at constant volume increases enthalpy of a system.

C. heat transfer at constant temperature decreases enthalpy of a system.

D. none of these.

ANSWER:,A

Q.42. Carnot cycle consists of

A. two constant volume and two isentropic processes

B. two isothermal and two isentropic processes

C. two constant pressure and two isentropic processes

D. one constant volume, one constant pressure and two isentropic processes

ANSWR:, B

Q.43. An open system is one in which

A. heat and work crosses the boundary of the system, but the mass of the working substance does not crosses the boundary of the system

B. mass of the working substance crosses the boundary of the system but the heat and work does not crosses the boundary of the system

C. both the heat and work as well as mass of the working substance crosses the boundary of the system

D. neither the heat and work nor the mass of the working substance crosses the boundary of the system

ANSWER:, C

Q.44. The unit of energy is S. I. units is

A. Joule (J)

B. Joule metre (Jm)

C. Watt(W)

D. Joule/metre (J/m)

ANSWER:, A

Q 45. When two bodies are in thermal equilibrium with a third body, they are also in thermal equilibrium with each other

A. zeroth law of thermodynamics

B. first law of thermodynamics

C. second law of thermodynamics

D. none of the above

ANSWER:,A

Q.46. A process, in which the working substance neither receives nor gives out heat to its surroundings during its expansion or compression, is called

A. isothermal process

B. hyperbolic process

C. adiabatic process

D. polytropic process

ANSWER:. C

Q.47. A system is said to be in thermodynamic equilibrium if,

A. it is in chemical equilibrium

B. it is in thermal equilibrium

C. it is in mechanical equilibrium

D. it follows above three

ANSWER:, D

Q.48. A PMM1 violates

A. first law .

B. Second law

C. (c) Both

D. none of these

ANSWER:, A

Q.49. A path is defined as

A. a series of change of processes

B. a series of change of states

C. a series of change of path

D. none of the above

ANSWER:, B

Q.50. Heating of dry steam above saturation temperature is known as

A. enthalpy

B. superheating

C. supersaturating

D. none of these

ANSWER:, B

Q.51 . A reversible adiabatic process is also known as

A. isentropic process

B. isobaric process

C. isothermal process

D. none of these

ANSWER:, A

Q.52. The system and surrounding together constitute

A. Boundary

B. Universe

C. Closed system

D. Open system

ANSWER:, B

Q.53. The first law of thermodynamics is also called as

A. conservation of mass

B. conservation of momentum

C. conservation of heat

D. conservation of energy

ANSWER:, D

Q.54.In isothermal process,

A. internal energy decreases

B. internal energy increases

C. change in internal energy is zero

D. internal energy first increases and then decreases.

ANSWER:, C

Q.55. Properties are

A. Point function

B. Path function

C. Both

D. None of these

ANSWER:, A

Q. 56 Entropy of an isolated system can never decrease, known as

A. Entropy principle

B. First law of thermodynamics

C. Second law of thermodynamics

D. Clasius inequality

ANSWER:, A

Q.57 .Ice kept in a well insulated thermo flask is an example of which system?

A. Closed system

B. Open system

C. Isolated system

D. Non-flow adiabatic system.

ANSWER:, C

Q.58 Cycle integral of properties are

A. one

B. zero

C. not zero

D. infinity

ANSWER:. B

Q.59. The measurement of a thermodynamic property known as temperature is based on

A. Zeroth law of thermodynamics

B. First law of thermodynamics

C. Second law of thermodynamics

D. none of these

ANSWER:, A

Q.60. One molecule of oxygen consists of _____ atoms of oxygen.

A. 2

B. 4

C. 8

D. 16

ANSWER:, A

Q.61. The heat flows from a cold body to a hot body with the aid of an external source. This statement is given by

A. Kelvin

B. Joule

C. Clausius

D. Gay-Lussac

ANSWER:, C

Q.62. Device used to generate and supply steam at a high pressure and temperature is known as

A. steam injector

B. steam boiler

C. steam turbine

D. steam condenser

ANSWER:.B

Q.63. A gear in which the teeth are parallel to the axis is known as

A. spur gear

B. helical gear

C. Double helical gear

D. Bevel gear

ANSWER: A

Q.64. Prony brake dynamometer is used to measure

A. Pressure

B. Torque

C. Temperature

D. Velocity

ANSWER: B

Q.65. Pitot tube is used to measure

A. Velocity

B. Temperature

C. Torque

D. strain

ANSWER:,A

Q.66. Boundary can be

A. Fixed

B. Movable

C. Both

D. None of these

ANSWER: C

Q.67. Economiser is a component of

A. I.C. Engine

B. Steam power plant

C. Refrigerator

D. Air compressor

ANSWER: B

Q.68. In a S.I. engine charge is ignited with

A. spark plug

B. compression

C. Both

D. None of these

ANSWER: A

Q.69 An isobaric process, has constant _____

A. density
B. pressure
c. temperature
D. volume

ANSWER: B

Q.70. In four stroke cycle engine, cycle is completed in _____

A. two strokes of the piston
B. two revolutions of the crankshaft
C. three strokes of the piston
D. four revolutions of the crankshaft

ANSWER: B

Q.71. Which of the following relations is true, for coefficient of performance (C.O.P)?

A. (C.O.P)heat pump – (C.O.P)refrigerator = 1
B. (C.O.P)heat pump – (C.O.P)refrigerator > 1
C. (C.O.P)heat pump – (C.O.P)refrigerator < 1
D. (C.O.P)heat pump – (C.O.P)refrigerator = 0

ANSWER: A

Q.72.If the value of n = 0 in the equation $pv^n = C$, then the process is called

A. constant volume process

B. adiabatic process

C. constant pressure process

D. isothermal process

Answer: C

Q.73. The value of specific heat at constant pressure (c_p) is _____ that of at constant volume (c_v).

A. less than

B. equal to

C. more than

D. none of these

Answer: C

Q.74. The absolute zero temperature is taken as

A. -273°C

B. 273°C

C. 237°F

D. -237°F

Answer: A

Q.75. The specific heat of water is

A. 1.817

B. 2512

C. 4.187

D. none of these

Answer: C

Q.76. In a refrigerating machine, heat rejected is _____ heat absorbed.

A. equal to

B. less than

C. greater than

D. none of these

Answer: C

Q.77. A molecule consisting of one atom is known as

A. monoatomic

B. diatomic

C. triatomic

D. polyatomic

Answer: A

Q.78. A definite area or a space where some thermodynamic process takes place is known as

A. thermodynamic system

B. thermodynamic cycle

C. thermodynamic process

D. thermodynamic law

Answer: A

Q.79. Which of the following is an intensive property of a thermodynamic system?

A. Volume

B. Temperature

C. Mass

D. Energy

Answer: B

Q.80. In S. I. units, the value of the universal gas constant is

A. 8.314 J/kg mole-K

B. 83.14 J/kgmole-K

C. 831.4 J/kgmole-K

D. 8314 J/kgmole-K

Answer: D

Q.81. The value of c_p/c_v for air is

A. 1

B. 1.4

C. 1.8

D. 23

Answer: B

Q.82. The heat absorbed or rejected by the working substance is given by (where *ds* = Increase or decrease of entropy, *T* = Absolute temperature, and *dQ* = Heat absorbed or rejected)

A. $\delta Q = T.ds$

B. $\delta Q = T/ds$

C. $dQ = ds/T$

D. none of these

Answer: A

Q.83. The general gas equation is (where *p* = Pressure, *v* = Volume, *m* = mass, *T* = Absolute temperature, and *R* = Gas constant)

A. $pv = mRT$

B. $pv = RT^m$

C. $pv^m = C$

D. $pv = (RT)^m$

Answer: A

Q.84. In a single acting reciprocating compressor, the suction, compression and delivery of air takes place in _____ of the piston.

A. one stroke

B. two strokes

C. three strokes

D. four strokes

Answer: B

Q.85. According to Kelvin-Planck's statement, a perpetual motion of the _____ is impossible.

A. first kind

B. second kind

C. third kind

D. none of these

Answer: B

Q.86. Relation between c_p and c_v is given by (where c_p = Specific heat at constant pressure, c_v = Specific heat at constant volume, $\gamma = c_p/c_v$, known as adiabatic index, and R = Gas constant)

A. $\frac{c_v}{c_p} = R$

B. $c_p - c_v = R$

C. $c_v = \frac{R}{(\gamma - 1)}$

D. Both (B) and (C)

Answer: D

Q.87. Valves are present in

A. two stroke engine

B. four stroke engine

C. Both

D. none of these

ANSWER: B

Q.88. RTD is used to measure

A. Temperature

B. Velocity

C. Flow rate

D. Pressure

ANSWER: A

Q 89.Manometers are used to measure

A. pressure

B. Temperature

C. Velocity

D. Torque

ANSWER: A

Q.90. The value of one bar (in S. I. units) is equal to

A. 1×10^2 N/m^2

B. 1×10^3 N/m^2

C. 1×10^4 N/m^2

D. 1×10^5 N/m^2

Answer: D

Q.91. The efficiency of the Carnot cycle is (where T_1 and T_2 = Highest and lowest temperature during the cycle)

A. $\frac{T_1}{T_2} - 1$

B. $1 - \frac{T_1}{T_2}$

C. $1 - \frac{T_2}{T_1}$

D. $1 + \frac{T_2}{T_1}$

Answer: C

Q.92. Slip in belt drive is difference between

A. Angular velocities between two pulleys

B. Linear speed of the rim of pulleys and the belt on it

C. The velocities of two pulleys

D. None of these

Answer: B

Q.93. When two pulleys are connected by a cross-belt drive , then both the pulleys rotate in

A. Same direction

B. Opposite direction

C. Not necessary

D. None of these

Answer: B

Q.94. Theoretically four stroke engine should develop power as compared to two stroke engine is

A. Half

B. Same

C. Double

D. Four times

Answer:A

Q.95. In I.C. engine power developed inside the cylinder is known as

A. Brake horse power

B. Indicated horse power

C. Pumping power

D. None of these above

Answer: B

Q.96. The power available at the shaft of an I.C. engine is known as

A. Brake horse power

B. Indicated power

C. Net indicated power

D. None of these above

Answer:A

Q. 97. In a two stroke engine, the number of revolutions of the crankshaft for completion of working cycle is

A. One

B. Two

C. Three

D. Four

Answer:A

Q.98. Which of the following is correct?

A. $P_{abs}=P_{atmospheric}+P_{gauge}$

B. $P_{abs}=P_{atmospheric}-P_{gauge}$

C. Both

D. None of these

Answer:C

Q.99. Creep in belt is due to

A. Elasticity of belt material

B. Elongation of belt due to tension

C. Differential elongation of belt due to difference in tension on the two sides of a pulley

D. Plasticity of belt material

Answer:C

Q. 100. What are the laws of robotics?

A. A robot should not injure a human being or , through inaction , allow a human to be harmed.

B. A robot must obey orders given by humans except when that conflicts with the First law.

C. A robot must protect its own existence unless that conflicts with the first or second law.

D. All of the above

Answer:D

Q. 101. The dryness (x) fraction of superheated steam is taken as

A. x= 0

B. x= 0.9

C. x= 0.999

D. x= 1

Answer:D

Q.102. A cyclic heat engine operates between a source temperature of 927 ^{o}C and a sink temperature of 27 ^{o}C. What will be the maximum efficiency of the heat engine?

A. 100 %

B. 80 %

C. 75 %

D. 70 %

Answer:C

Q.103. The amount of heat transferred to convert unit mass of solid to vapour is called as
A. latent heat of vaporization

B. latent heat of fusion

C. latent heat of sublimation

D. specific heat

Answer:C

Q.104. Assume that a reversible heat engine is operating between a source at T1 and a sink at T2. If T2 decreases, the efficiency of the heat engine _____

A. decreases

B. increases

C. remains constant

D. none of the above

Answer:B

Q.105. The vapour absorption refrigeration system is

A. more noisy than the vapour compression refrigeration system

B. more silent than the vapour compression refrigeration system

C. equally noisy as the vapour compression refrigeration system

D. it depends upon plant capacity

Answer:B

Q.106. If m1 and m2 are the masses of liquid and vapour respectively in a liquid-vapour mixture, then what is the formula for dryness fraction x?

A. x = (m1 + m2) / m1

B. x = (m1 + m2) / m2

C. x = m1 / (m1 + m2)

D. x = m2 / (m1 + m2)

Answer:D

Q.107. Arbitrarily, the value of triple point is taken as

A. 0 K

B. 273.16 ^{o}C

C. 273.16 K

D. none of the above

Answer:C

Q.108. What is the process carried out in generator of vapour absorption refrigeration cycle?

A. weak solution of ammonia in water is heated

B. strong solution of ammonia in water is heated

C. only water is heated and heat is given to the ammonia to form its vapour

D. none of the above

Answer:B

Q.109. The compressor in the vapour compression system is replaced by

A. an absorber

B. a generator

C. an absorber-generator

D. none of the above

Answer: C

Q.110. The mechanical work required to run vapour absorption system

A. is more than the mechanical work required to run vapour compression system

B. is less than the mechanical work required to run vapour compression system

C. is similar to the mechanical work required to run vapour compression system

D. cannot say

Answer:B

Q.111. Carnot cycle is

A. a reversible cycle

B. an irreversible cycle

C. practical cycle

D. none of the above

Answer:A

Q.112. Which of the following is NOT a path function?
A. Internal energy

B. Heat energy

C. Work energy

D. none of the above

Answer:A

Q.113. Work done in a constant volume process is

A. negative

B. zero

C. positive

D. none of the above

Answer:B

Q.114. What is the purpose of using economizer in the boiler?

A. to heat feedwater by utilizing heat from exhaust gases

B. to heat feedwater by utilizing some heat from superheated steam

C. to superheat steam

D. none of the above

Answer:A

Q.115. The heat required to melt 1 tonne of ice in 24 hours is equivalent to

A. one tonne of refrigeration

B. two tonne of refrigeration

C. half tonne of refrigeration

D. four tonne of refrigeration

Answer:A

Q.116. What is the state, at which saturated liquid line with respect to vaporisation and saturated vapour line on p-v diagram of pure substance, meet called?

A. saturation state

B. critical state

C. vaporisation state

D. superheated vapour state

Answer:B

Q.117. How are the efficiencies of any heat engine (η) and reversible heat engine (η_R) compared, when both are operating between same heat source and same heat sink?

A. $\eta = \eta_R$

B. $\eta > \eta_R$

C. $\eta < \eta_R$

D. cannot say

Answer:C

Q.118. Considering relation between Kelvin-Planck and Clausius statement, if one statement between the two is violated then

A. other one may be or may not be violated

B. other one is also violated

C. other one must be correct

D. none of the above

Answer:B

Q.119. In evaporation process of vapour compression refrigeration system

A. heat is rejected from refrigerant to surroundings

B. heat is rejected from surroundings to refrigerant

C. only pressure change takes place

D. none of the above

Answer:B

Q.120. How is the condensation process in vapour compression refrigeration cycle carried out?

A. at constant volume

B. at constant pressure

C. at constant enthalpy

D. all of the above

Answer:B

Q.121. Efficiency of heat engine cycle is the ratio of

A. total heat input to the cycle (Qin) to net work output of the cycle (Wnet)
B. net work output of the cycle (Wnet) to total heat input to the cycle (Qin)
C. net work output of the cycle (Wnet) to heat rejected from the system (Qout)
D. none of the above

Answer:B

Q.122. What is the cyclic integral of dQ/T for reversible process?

A.less than zero
B. zero
C. more than zero
D. none of the above

Answer:B

Q.123. The unit of pressure in S.I. units is
A. kg/cm2
B. mm of water column
C. pascal
D. dynes per square cm

Answer:C

Q.124. Gases have
A.only one value of specific heat
B. two values of specific heat
C. three values of specific heat
D. no value of specific heat

Answer:B

Q.125. Properties of substances like pressure, temperature and density, in thermodynamic coordinates are
A.path functions
B. point functions
C. cyclic functions
D. real functions

Answer:B

Q.126. The value of n = 1 in the polytropic process indicates it to be
A.reversible process
B. isothermal process
C. adiabatic process
D. irreversible process

Answer:B

Q.127. If value of n is infinitely large in a polytropic process $pV^n = C$, then the process is known as constant
A.volume
B. pressure
C.temperature
D. enthalpy

Answer:A

Q.128. In an isothermal process, the internal energy of gas molecules
A. increases
B. decreases
C. remains constant

D. may increase/decrease depending on the
properties of gas

Answer:C

Q.129. Universal gas constant is defined as
equal to product of the molecular weight of the gas and
A. specific heat at constant pressure
B. specific heat at constant volume
C. ratio of two specific heats
D. gas constant

Answer:D

Q.130. Carnot cycle efficiency depends upon
A.properties of the medium/substance used
B. condition of engine
C. working condition
D. temperature range of operation

Answer:D

Q.131. Barometric pressure is equal to
A.760 mm Hg
B. zero mm Hg
C. 735.6 mm Hg
D. 1 mm Hg

Answer:A

Q.132. Which gears are used to connect two intersecting shaft axes?
A. helical gear
B. Spur gear
C. Bevel gear
D. All of the above

Answer:C

Q.133. Which of the following relations depict relation between Celsius and Fahrenheit scale?
A. (^oC / 5) = (^oF – 32) / 9

B. (^oC / 9) = (^oF – 32) / 5

C. (^oC / 32) = (^oF – 9) / 5

D. None of the above

Answer: A

Q.134. A process, in which the gas is heated or expanded in such a way that the product of its pressure and volume remains constant, is called
A.Isothermal process
B. Isobaric process
C. Adiabatic process
D. Polytropic process
Answer:A

Q.135. The refrigerant commonly used in vapor absorption system is:

A. Water

B. Freon-12

C. SO_2

D. Aqua-ammonia

Answer:D

Q.136. Sum of atmospheric and gauge pressure is called

A. Total pressure

B. Absolute pressure

C. Normal pressure

D. Natural pressure

Answer:B

Q.137. Latent heat of fusion of ice is:

A. 335KJ/kg

B. 445KJ/kg

C. 2257 KJ/kg

D. None of these

Answer:A

Q.138. If in steam the water content is 5%, its dryness fraction is:

A. 95%

B. 0%

C. 5%

D. None of these

Answer:A

Q.139. The energy content of steam is called:

A. Entropy

B. Density

C. Specific volume

D. Enthalpy

Answer:D

Q.140. Super heated steam is

A. Steam at a temperature below boiling point of water

B. Steam at a temperature above boiling point of water

C. Steam at boiling point of water

D. None of the above

Answer:B

Q.141. Saturated steam 100% dry contains:

A. 0% latent heat

B. 90% latent heat

C. Sensible heat

D. 100% latent heat

Answer:D

Q.142. Which of these components on the boiler is used to recover the waste heat of the flue gases for heating feed water?

A. Super heater

B. Economizer

C. Pre heater

D. Fusible plug

Answer:B

Q.143. Which of these components on the boiler is used to increase the temperature steam above saturation temperature?

A. Air pre heater

B. Economizer

C. Super heater

D. None of the above

Answer:C

Q.144. The simplest form of manometer used for measuring moderate pressures is

A. Piezometer

B. Differential manometer

C. U-tube manometer

D. None

Answer:A

Q.145. In the inverted U-tube Differential manometer, how is the density of manometric fluid used relative to the fluid flowing in the pipes

A. Density is more than that of fluid flowing in pipes
B. Density is less than that of fluid flowing in pipes
C. Density is equal to that of fluid flowing in pipes
D. None of the mentioned

Answer:B

Q.146. Which device is popularly used for measuring difference of low pressure?
A. Inverted U-tube Differential Manometer
B. U-tube Differential Manometer
C. Inclined Single column manometer
D. Vertical Single column manometer

Answer:A

Q.147. What is the root word of “robot”?

A. Robot
B. Robota
C. Roboto
D. Robust

Answer:B

Q.148. The Robot designed with Cartesian coordinate systems has

A. Three linear movements

B. Three rotational movements

C. Two linear and one rotational movement

D. Two rotational and one linear movement

Answer:A

Q.149. The reading of pressure gauge fitted on a vessel is 25 bar. The atmospheric pressure is 1.03 bar. The absolute pressure in the vessel is

A. 23.97 bar

B. 25 bar

C. 26.03 bar

D. 34.81 bar

Answer: C

Q.150. The change of entropy, when heat is absorbed by the gas is

A. Positive

B. Negative

C. Positive or negative

D. None of these

Answer:A